

Amendments to the Drawings:

The drawing sheet or sheets attached in connection with the above-identified application containing figure 4 is presented as a new formal drawing sheet.

New figure 4 illustrates the structure of the cladding material.

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Drawings

The drawings were objected to under 37 CFR 1.83(a). The examiner requested that the structure of the cladding must be shown. New drawings sheet 4 illustrate the structure of the cladding. In particular, Fig. 4 illustrates that the cladding is a metal. (For example in the Original Specification, page 5, lines 16-20 and page 6 line 6) Thus no new matter is added. Therefore it is respectfully requested that the objection is withdrawn.

Status of the claims

Claim 1 is amended to incorporate the subject matter of original claim 8 and claim 8 is cancelled, without prejudice or disclaimer to avoid redundancy.

Claims rejections under 35 U.S.C. § 103

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otto (U.S. Patent No. 6,188,921) in view of Christopherson (U.S. Patent No. 6,339,047). The rejection as to cancelled claim 8 is moot. The rejection as to claims 1-7 is respectfully traversed.

Claim 1 recites among other features,

a material of said cladding metal having a breaking strain of at least 30% in a stress-strain test; and

wherein the material of said cladding metal is silver having an impurity concentration of 10 ppm to 500 ppm.

Otto and Christopherson, alone or in combination fail to teach, suggest or render predictable the above recited features. In particular, with regard to Otto the examiner acknowledges that it fails to disclose a material of said cladding metal having a breaking strain of at least 30% in a stress-strain test. (Office Action of July 22, 2008; page 3, lines 16-19)

To overcome the lack of disclosure in Otto, the Office Action of July 22, 2008 cites portions of Otto that disclose,

Adding a solute having a significantly different atomic radius from that of a pure metal usually has an effect of changing the lattice parameter of the material, and thereby straining it. When strain is introduced into one component of a composite system, residual stresses and strains can arise. In the case of a silver/superconductor composite, such stresses and strains may introduce defects into the brittle superconductor phase upon cooling to operating temperature (e.g., 77 K). This effect can be reduced or eliminated by mechanical stabilization of the monofilament tapes. The mechanical stabilization process involves attaching a tape on one or both sides to a stiff mechanical support after the diffusion step. Attachment may be, for example, by soldering or by bonding with epoxy or other known adhesive. Suitable supports include stainless steel or fiberglass plates. (Col. 4, ll. 14-30)

Otto does not teach or suggest cladding metal having a breaking strain of at least 30% in a stress-strain test. Otto refers to the stresses and strains caused by adding a solute to the cladding material. To solve this problem Otto teaches away from the cited features of claim 1.

In particular, Otto teaches using mechanical stabilization by soldering or by bonding one or both sides of a tape to a stiff mechanical support. While Otto refers in general to stress and strains, Otto does not refer to a stress strain test or using a cladding metal that has a breaking strain of at least 30% in a stress strain.

Moreover, Otto fails to teach, suggest or render predictable a silver cladding metal having an impurity concentration of 10 ppm to 500 ppm. Christopherson is cited in the Office Action as addressing distinctions of Otto and the claimed features. However, Christopherson does not address the distinction noted above with reference to independent claim 1. Specifically, Christopherson does not teach, suggest or render predictable a silver cladding metal having an impurity concentration of 10 ppm to 500 ppm.

Instead, while Christopherson teaches that high-purity silver usually contains some amount of impurity (Col. 4, ll. 14-16), Christopherson fails to disclose the claimed numerical

range of the impurity concentration or its effect. As recited in the original specification the undesirable processing cracks in the superconducting wire can be reduced by controlling the purity level. (Page 19, line 25 to page 20, line 5) Specifically impurity concentrations below and above the claimed range created greater processing cracks. (Page 18, Table 1, Examples 6 through 10) In particular example 6 through 10 use different levels of impurity concentrations and cracks occurred at an impurity concentration of 5 ppm and 1000 ppm. (Original Specification, page 19, line 25 to page 20 line 3) These advantages relating to the purity of silver were not recognized by Christopherson.

Moreover, Christopherson fails to teach, suggest or render predictable a cladding metal having a breaking strain of at least 30% in a stress-strain test. The disclosure of Christopherson fails to provide the motivation for the features of claim 1.

Therefore, claim 1 is believed to be allowable. Because claims 2-7 depend from claim 1 they are believed to be allowable for at least the same reasons claim 1 is believed to be allowable.

Concluding remarks

After amending the claims as set forth above, claims 1 - 14 are pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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